

What is claimed is:

1. A projection display apparatus, comprising:

a light source supplying a first polarized light and a second polarized light;

5 a polarizing beam splitter separating the first polarized light and the second polarized light into two directions;

a first reflective light panel having a first color filter embedded therein, the first reflective light panel receiving the first polarized light from the polarizing beam splitter and reflecting a first image light;

10 a second reflective light panel receiving the second polarized light from the polarizing beam splitter and reflecting a second image light;

a first color selector converting the first image light and the second image light into the same polarities; and

a projection lens receiving and projecting the combined first and second image light from the first color selector.

15 2. The projection display apparatus as claimed in claim 1, wherein the directions of the first and second polarized light are orthogonal.

3. The projection display apparatus as claimed in claim 1 further comprising a first polarizer disposed between the first color selector and the projection lens.

4. The projection display apparatus as claimed in claim 1 further comprising:

20 a first quarter wavelength plate disposed between the polarizing beam splitter and the first reflective light panel; and

a second quarter wavelength plate disposed between the polarizing beam splitter and the second reflective light panel.

25 5. The projection display apparatus as claimed in claim 1, wherein the first and second reflective light panels are LCoS panels.

6. The projection display apparatus as claimed in claim 1, wherein the first color filter is a single-color filter.

7. The projection display apparatus as claimed in claim 1, wherein the first color filter is a two-color filter.

8. The projection display apparatus as claimed in claim 6, wherein the single-color filter is selected from a group of red, green and blue colors.

9. The projection display apparatus as claimed in claim 7, wherein the two-color filter is selected from a group of red, green and blue colors.

5 10. The projection display apparatus as claimed in claim 1, wherein the second reflective light panels has a second color filter embedded therein.

11. A projection display apparatus, comprising:

a light source supplying a first polarized light and a second polarized light;

10 a polarizing beam splitter separating the first polarized light and the second polarized light into two directions;

a first reflective light panel having a first color filter embedded therein, the first reflective light panel receiving the first polarized light from the polarizing beam splitter and reflecting a first image light;

15 a second reflective light panel receiving the second polarized light from the polarizing beam splitter and reflecting a second image light;

a first quarter wavelength plate disposed between the polarizing beam splitter and the first reflective light panel;

a second quarter wavelength plate disposed between the polarizing beam splitter and the second reflective light panel; and

20 a projection lens receiving and projecting the combined first and second image.

12. The projection display apparatus as claimed in claim 11, wherein the directions of the first and second polarized light are orthogonal.

13. The projection display apparatus as claimed in claim 11 further comprising a first polarizer disposed between the polarizing the beam splitter and the projection lens.

25 14. The projection display apparatus as claimed in claim 11, wherein the first and second reflective light panels are LCoS panels.

15. The projection display apparatus as claimed in claim 11, wherein the first color filter is a single-color filter.

16. The projection display apparatus as claimed in claim 11, wherein the first color filter is a two-color filter.
17. The projection display apparatus as claimed in claim 15, wherein the single-color filter is selected from a group of red, green and blue colors.
- 5 18. The projection display apparatus as claimed in claim 16, wherein the two-color filter is selected from a group of red, green and blue colors.
19. The projection display apparatus as claimed in claim 11, wherein the second reflective light panels has a second color filter embedded therein.